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10/670,365	09/26/2003	Yong Cheol Park	0465-1028P	6887

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EXAMINER

CHOW, LIXI

ART UNIT	PAPER NUMBER
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2627

NOTIFICATION DATE	DELIVERY MODE
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09/17/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/670,365	Applicant(s) PARK ET AL.	
	Examiner Lixi Chow	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 51-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 51-64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claim 53 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, claim 53 specifies, "the first management area is located within the data area". However, Fig. 8 of the disclosure shows that TDMA 36e is located within the lead-in area not the data area. Other figure (Fig. 4) shows that temporary list information can be recorded within data area, but that temporary list information does not include second management information, which indicates the location of the first management information. Therefore, the limitation set forth in claim 53 is inconsistent with the disclosure.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 59-62 are rejected under 35 U.S.C. 102(e) as being anticipated by Fukasawa (US 6,615,363).

Regarding claim 59:

Fukasawa discloses a method for managing a defective unit on a write-once recording medium, the recording medium including a data area, the data area having a spare area (see col. 5, lines 58-65; attribute information indicates that medium is write-once type), the method comprising:

(a) writing data written in the defective unit onto a replacement unit in the spare area if the defective unit is detected within the data area (see col. 5, lines 24-26);

(b) writing temporary defect list information including at least one defect entry onto a temporary defect management area on the write-once recording medium, wherein the defect entry indicates a location of the defective unit and a location of the replacement unit in the spare area (see Fig. 4 and col. 5, lines 26-30); and

(c) writing, at finalization of the write-once recording medium, last temporary defect list information written in the temporary defect management area onto a defect management area as permanent defect list information (certainly when writing defect entry onto a write-once type medium, the last entry being written is a permanent entry).

Regarding claim 60:

Fukasawa discloses the method as claimed in claim 59, wherein the write-once recording medium is finalized when a user data area of the data area is full (it is inherent that the write-once type medium is finalized when it is full).

Regarding claims 61 and 62:

Claims 61 and 62 are essentially the same as claims 59 and 60. Therefore, claims 61 and 62 are rejected under the same reasons set forth in claims 59 and 60. Please note that Fig. 9 of Fukasawa shows the apparatus.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 51-53, 55-58, 63 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukasawa (US 6,615,363) in view of Ito et al. (US 5,404,357; hereafter Ito).

Regarding claim 51:

Fukasawa discloses a method for managing a defective unit on a recording medium, the recording medium including a first management area being a temporary management area, a second management area and a data area, the data area having a spare area (see col. 5, lines 13-43; the second management area of Fukasawa corresponds to the temporary management area as claimed), the method comprising:

(a) writing data written in the defective unit onto a replacement unit in the spare area if the defective unit is detected within the data area (see col. 5, lines 24-26); and

(b) writing first management information onto the first management area, the first management information including a location of at least the defective unit and the replacement unit (see col. 5, lines 22-30).

Fukasawa fails to teach whether a second management information is recorded onto the first management area, where the second management information includes information about the location of the first management information. However, Ito discloses a method for managing a defective unit on a recording medium, the method comprising:

providing a second management information onto a first management area (see Figs. 1 and 2a; second management information corresponds to the DDS, and first management area corresponds to one of the DMA), the second management information includes a location of the first management information (each of the DMA includes DDS which contains address information of the list).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the method of Fukasawa by recording second management information onto the temporary management area with suggestion from Ito. One would have been motivated to do so, because Ito points out that there is a need to have all management areas containing the same information for the purpose of fail-safe (see col. 1, lines 24-28).

Regarding claim 52:

Fukasawa discloses the method as claimed in claim 51, further comprising:

(c) updating the first management information based on the (a) and (b) steps until the recording medium is to be finalized (see Fig. 4; a defect entry is recorded when it detects that a defect occurs); and

(d) writing, at finalization of the recording medium, the updated first management information written in the first management area onto the second management area (see col. 3, lines 1-17).

Fukasawa fails to disclose writing/updating second management information; however, Ito discloses the importance of providing second management information together with first management information (see claim 1).

Also see claim 1 for reason to combine.

Regarding claim 53:

Fukasawa discloses the method as claimed in claim 51, wherein the first management area is located within the data area (see Fig. 1, area 201 corresponds to the first management area).

Regarding claim 55:

Fukasawa discloses an apparatus for managing a defective unit on a recording medium, the recording medium including a first management area being a temporary management area, a second management area and a data area having a spare area, the apparatus comprising:

an optical pickup for writing/reading data to/from the recording medium (see Fig. 9, element 6);

a servo unit for controlling the pickup to maintain a distance between the pickup and the recording medium (see Fig. 9, element 9); and

a controller (see Fig. 9, element 4) for controlling the servo unit and pickup to write data written in the defective unit onto a replacement unit in the spare area if the defective unit is detected within the data area (see col. 5, lines 24-26), and to write first management information including a location of at least the defective unit and the replacement unit(see col. 5, lines 22-30).

Fukasawa fails to teach whether a second management information is recorded onto the first management area, where the second management information includes information about the location of the first management information. However, Ito discloses an apparatus for managing a defective unit on a recording medium, the apparatus comprising:

a unit for writing a second management information onto a first management area (see Figs. 1 and 2a; second management information corresponds to the DDS, and first management area corresponds to one of the DMA), the second management information includes a location of the first management information (each of the DMA includes DDS which contains address information of the list).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the apparatus of Fukasawa by recording second management information onto the temporary management area with suggestion from Ito. One would have been motivated to do so, because Ito points out that there is a need to have all management areas containing the same information for the purpose of fail-safe (see col. 1, lines 24-28).

Regarding claim 56:

Claims 56 recite similar limitations as in claim 52; hence, claim 56 is rejected under the same reasons set forth in claim 52.

Regarding claims 57 and 58:

Claims 57 and 58 are essentially the same as claims 51 and 52. In addition to claim 51, Fukasawa also discloses at least one second management area allocated outside of the data area (see Fig. 1, area 10a corresponds to the second management area). Hence, claims 57 and 58 are rejected under the same reasons set forth in claims 51 and 52.

Regarding claim 63:

Fukasawa discloses a write-once recording medium (see Fig. 1), comprising:

at least one recording layer including a lead-in area (area 10a), a data area (area 501) and a lead-out area (area 10b), the data area including at least one spare area having a replacement

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unit (area 401), the spare area allocated on an inner and/or outer portion of the data area for replacement-writing data written in a defective unit of the data area onto the replacement unit;

at least one temporary defect management area (TDMA) allocated within the data area and/or outside of the data area for writing temporary defect list (TDFL) pertaining to the defective unit (see Fig. 1, area 201 corresponds to the TDMA); and

at least one defect management area (DMA) allocated in the lead-in area and/or the lead-out area for writing therein last written TDFL from the TDMA when the write-once recording medium is to be finalized (see Fig. 1, area 10a corresponds to the DMA, and during finalization, information from TDMA is copied into DMA).

Fukasawa fails to disclose whether temporary disc definition structure (TDDS) is recorded in the TDMA; however, Ito teaches a recording medium having plurality of defect management areas, where each DMA is provided with disc definition structure (see Figs. 1 and 2a).

One of ordinary skill in the art, at the time the invention was made, would have been obvious to modify the recording medium of Fukasawa by recording temporary disc definition structure onto the temporary management area with suggestion from Ito. One would have been motivated to do so, because Ito points out that there is a need to have all management areas containing the same information for the purpose of fail-safe (see col. 1, lines 24-28).

Regarding claim 64:

Fukasawa discloses the write-once recording medium as claimed in claim 63, wherein the write-once recording medium is finalized when a user data area of the data area is full (it is inherent that the write-once type medium is finalized when it is full).

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6. Claims 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fukasawa in view of Ito as applied to claim 51 above, and further in view of Kim et al. (US 6,564,345).

Regarding claim 54

Fukasawa fails to disclose the first management information is located outside of the data area; however, Kim discloses a method of defect management, wherein a first management area is located outside of the data area (see Fig. 10; T-PDL corresponds to the first management area, and Fig. 10 shows plurality of location where T-PDL can be arranged).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the method of Fukasawa by recording the temporary management area outside of the data area, because Kim shows that it is a matter of design choice.

Response to Arguments

7. Applicant's arguments filed 7/05/07 have been fully considered but they are not persuasive. Applicant argues, "Fukasawa's copying step S1300 that occurs at the end of each recording operation cannot be equated to Applicants' finalization of the recording medium". However, Examiner respectfully disagrees. The finalization process described in col. 12, lines 25-28 of Fukasawa is not any different from the finalization process claimed in claim 52, except that Fukasawa does not update the second management information; however that shortcoming is overcome by Ito. Fukasawa also teaches that defect management is performed on the write-once type medium, and the finalization process S1300 is carried out in order to update the second management area, which is located in the lead-in area. Accordingly, Applicant's argument with regards to Fukasawa is not convincing.

Applicant's arguments with respect to claims 51, 55 and 57 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lixi Chow whose telephone number is 571-272-7571. The examiner can normally be reached on Mon-Fri, 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

9/10/07



WAYNE YOUNG
SUPERVISORY PATENT EXAMINER